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PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.: 09/981,206  
Filed: October 17, 2001  
Confirmation No.: 5790  
Applicant(s): Samuel I. Achilefu et al.  
For (title): CARBOCYANINE DYES FOR TANDEM, PHOTODIAGNOSTIC  
AND THERAPEUTIC APPLICATIONS  
Atty Docket: MRD-74

Cincinnati, Ohio 45202

December 26, 2001

Box SEQUENCE  
Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

**STATEMENT UNDER 37 C.F.R. §1.821(f)**

The information recorded in computer readable form of United States Patent Application, Express Mail No. EL576790364US, filed October 17, 2001, and the paper copy of same are identical to the written sequence listing contained in the above-referenced application and contain no new matter.

Respectfully submitted,

WOOD, HERRON & EVANS, L.L.P.

*Beverly A. Lyman*

Beverly A. Lyman  
Reg. No. 41,961

2700 Carew Tower  
441 Vine Street  
Cincinnati, Ohio 45202  
(513) 241-2324 - Office  
(513) 421-7269 - Facsimile

**RAW SEQUENCE LISTING**  
**ERROR REPORT**COPY OF PAPERS  
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109

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/981,206

Source: O I P E

Date Processed by STIC: 11/2/01

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

**Checker Version 3.0**

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO).

Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

## Raw Sequence Listing Error Summary

ERROR DETECTED    SUGGESTED CORRECTION    SERIAL NUMBER: 09/981, 206

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1  Wrapped Nucleic  
   Wrapped Aminos The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."

2  Invalid Line Length The rules require that a line not exceed 72 characters in length. This includes white spaces.

3  Misaligned Amino  
  Numbering The numbering under each 5<sup>th</sup> amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.

4  Non-ASCII The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.

5  Variable Length Sequence(s) \_\_\_\_\_ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.

6  PatentIn 2.0  
  "bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) \_\_\_\_\_. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.

7  Skipped Sequences  
  (OLD RULES) Sequence(s) \_\_\_\_\_ missing. If intentional, please insert the following lines for each skipped sequence:  
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
(i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)  
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
This sequence is intentionally skipped  
  
Please also adjust the "(ii) NUMBER OF SEQUENCES." response to include the skipped sequences.

8  Skipped Sequences  
  (NEW RULES) Sequence(s) \_\_\_\_\_ missing. If intentional, please insert the following lines for each skipped sequence.  
<210> sequence id number  
<400> sequence id number  
000

9  Use of n's or Xaa's  
  (NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing.  
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.  
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

10  Invalid <213>  
  Response Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence

11  Use of <220> Sequence(s) \_\_\_\_\_ missing the <220> "Feature" and associated numeric identifiers and responses.  
Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.  
(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)

12  PatentIn 2.0  
  "bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/981,206

DATE: 11/02/2001  
TIME: 15:26:24

Input Set : A:\es.txt  
Output Set: N:\CRF3\11022001\I981206.raw

3 <110> APPLICANT: Achilefu, Samuel I.  
4 Rajagopalan, Raghavan  
5 Dorshow, Richard B.  
6 Bugaj, Joseph E.  
8 Mallinckrodt Inc.  
10 <120> TITLE OF INVENTION: Carbocyanine Dyes For Tandem, Photodiagnostic  
11 and Therapeutic Applications  
13 <130> FILE REFERENCE: MRD-74  
C--> 15 <140> CURRENT APPLICATION NUMBER: US/09/981,206  
16 <141> CURRENT FILING DATE: 2001-10-17  
W--> 18 <150> PRIOR APPLICATION NUMBER:  
W--> 19 <151> PRIOR FILING DATE: Do not respond if no other prior application  
21 <160> NUMBER OF SEQ ID NOS: 8  
23 <170> SOFTWARE: PatentIn Version 3.1  
25 <210> SEQ ID NO: 1  
26 <211> LENGTH: 8  
27 <212> TYPE: PRT  
28 <213> ORGANISM: Artificial Sequence  
30 <220> FEATURE:  
W--> 31 <221> NAME/KEY: MOD RES → put underscore between MOD + RES → MOD\_RES  
32 <222> LOCATION: (1)...(8)  
33 <223> OTHER INFORMATION: Xaa at location 1 represents D-Phe. Artificial sequence is  
34 completely synthesized.  
35 <223> OTHER INFORMATION: Xaa at locations 2 and 7 represents Cys with an  
36 intramolecular disulfide bond between two Cys  
37 amino acids. Artificial sequence is completely synthesized.  
38 <223> OTHER INFORMATION: Xaa at location 4 represents D-Trp. Artificial sequence is  
39 completely synthesized.  
41 <400> SEQUENCE: 1  
W--> 42 Xaa Xaa Tyr Xaa Lys Thr Xaa Thr  
43 1 5  
47 <210> SEQ ID NO: 2  
48 <211> LENGTH: 8  
49 <212> TYPE: PRT  
50 <213> ORGANISM: Artificial Sequence  
52 <220> FEATURE:  
W--> 53 <221> NAME/KEY: MOD RES  
54 <222> LOCATION: (1)...(8)  
55 <223> OTHER INFORMATION: Xaa at location 1 represents D-Phe. Artificial sequence is  
56 completely synthesized.  
57 <223> OTHER INFORMATION: Xaa at locations 2 and 7 represents Cys with an  
58 intramolecular disulfide bond between two Cys  
59 amino acids. Artificial sequence is completely synthesized.  
61 <223> OTHER INFORMATION: Xaa at location 4 represents D-Trp. Artificial sequence is  
62 completely synthesized.  
63 <223> OTHER INFORMATION: Xaa at location 8 represents Thr-OH. Artificial sequence is  
64 completely synthesized.

Does Not Comply  
Corrected Diskette Needed  
Errors on pp. 1-3

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/981,206

DATE: 11/02/2001  
TIME: 15:26:24

Input Set : A:\es.txt  
Output Set: N:\CRF3\11022001\I981206.raw

66 <400> SEQUENCE: 2  
W--> 67 Xaa Xaa Tyr Xaa Lys Thr Xaa Xaa  
68 1 5  
71 <210> SEQ ID NO: 3  
72 <211> LENGTH: 11  
73 <212> TYPE: PRT  
74 <213> ORGANISM: Peptide  
76 <400> SEQUENCE: 3  
77 Gly Ser Gly Gln Trp Ala Val Gly His Leu Met  
78 1 5 10  
81 <210> SEQ ID NO: 4  
82 <211> LENGTH: 11  
83 <212> TYPE: PRT  
84 <213> ORGANISM: Peptide - same  
86 <400> SEQUENCE: 4  
87 Gly Asp Gly Gln Trp Ala Val Gly His Leu Met  
88 1 5 10  
92 <210> SEQ ID NO: 5  
93 <211> LENGTH: 8  
94 <212> TYPE: PRT  
95 <213> ORGANISM: Peptide - same  
97 <400> SEQUENCE: 5  
98 Asp Tyr Met Gly Trp Met Asp Phe  
99 1 5  
102 <210> SEQ ID NO: 6  
103 <211> LENGTH: 8  
104 <212> TYPE: PRT  
105 <213> ORGANISM: Artificial Sequence  
107 <220> FEATURE  
W--> 108 <221> NAME/KEY: MOD RES  
109 <222> LOCATION: (1)...(8)  
110 <223> OTHER INFORMATION: Xaa at locations 3 and 6 represents Norleucine. Artificial  
111 sequence is completely synthesized.  
113 <400> SEQUENCE: 6  
W--> 114 Asp Tyr Xaa Gly Trp Xaa Asp Phe  
115 1 5  
118 <210> SEQ ID NO: 7  
119 <211> LENGTH: 8  
120 <212> TYPE: PRT  
121 <213> ORGANISM: Artificial Sequence  
123 <220> FEATURE  
W--> 124 <221> NAME/KEY: MOD RES  
125 <222> LOCATION: (1)...(8)  
126 <223> OTHER INFORMATION: Xaa at location 1 represents D-Asp. Artificial sequence is  
127 completely synthesized.  
128 <223> OTHER INFORMATION: Xaa at locations 3 and 6 represents Norleucine. Artificial  
129 sequence is completely synthesized.  
131 <400> SEQUENCE: 7  
W--> 132 Xaa Tyr Xaa Gly Trp Xaa Asp Phe

*Unknown A/Bombesin*  
- invalid; see error summary sheet, item 10

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/981,206

DATE: 11/02/2001  
TIME: 15:26:24

Input Set : A:\es.txt  
Output Set: N:\CRF3\11022001\I981206.raw

133 1 5  
137 <210> SEQ ID NO: 8  
138 <211> LENGTH: 8  
139 <212> TYPE: PRT  
140 <213> ORGANISM: Artificial Sequence  
142 <220> FEATURE:  
W--> 143 <221> NAME/KEY: MOD RES  
144 <222> LOCATION: (1)...(8)  
145 <223> OTHER INFORMATION: Xaa at location 1 represents D-Lys. Artificial sequence is  
146 completely synthesized.  
148 <400> SEQUENCE: 8  
W--> 149 Xaa Pro Arg Arg Pro Tyr Ile Leu  
150 1 5

VERIFICATION SUMMARY  
PATENT APPLICATION: US/09/981,206

DATE: 11/02/2001  
TIME: 15:26:25

Input Set : A:\es.txt  
Output Set: N:\CRF3\11022001\I981206.raw

L:15 M:270 C: Current Application Number differs, Replaced Application Number  
L:18 M:256 W: Invalid Numeric Header Field, <150> PRIOR APPLICATION NUMBER:  
L:19 M:256 W: Invalid Numeric Header Field, Wrong Prior FILING DATE:YYYY-MM-DD  
L:31 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:1  
L:42 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1  
L:53 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:2  
L:67 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:108 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:6  
L:114 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:124 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:7  
L:132 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:143 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:8  
L:149 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8